



Courtesy of GCRTA

**Project name:** Cleveland Energy Conservation Project

**Transit agency:** Greater Cleveland Regional Transit Authority

**Location:** Cleveland, Ohio

**TIGGER goal:** Energy reduction

**FTA region number:** V

**Award amount:** \$2,257,000

**Congressional district:** OH-11

**Funding mechanism:**  
Recovery Act (ARRA)

## ***TIGGER Teams Up With Cleveland to Improve Energy Efficiency***

The Greater Cleveland Regional Transit Authority (GCRTA) is using less energy, saving money, improving air quality, and reducing its greenhouse gas emissions through building improvements funded by the U.S. Department of Transportation's TIGGER program.

GCRTA's Cleveland Energy Conservation Project is reducing electricity use in 10 facilities through a variety of strategies. With \$2.3 million in TIGGER funding, the agency is upgrading its lighting and lighting controls and has replaced leaky, inefficient doors and a poorly insulated roof. The improvements are projected to reduce GCRTA's facility-related energy consumption by 31%, amounting to nearly \$500,000 in annual energy savings and yielding a payback period of 4.5 years on the TIGGER investment.

GCRTA conducted an energy review and identified a need for 22,590 new light bulbs, fixtures, and sensors in the 10 facilities. So the agency is replacing old T12 fluorescent lights with higher-efficiency Lake Erie Electric T8 fluorescent lights. The T8 lighting employs electronic ballasts in place of the older, less efficient magnetic ballasts. In some



Facility Project

### ***The Greater Cleveland Regional Transit Authority (GCRTA)***

provides transit services to Cleveland and surrounding communities in Cuyahoga County, Ohio. Its service area includes 458 square miles and 59 municipalities, with a population of 1.3 million. GCRTA maintains 492 buses for 70 fixed routes. It operates 21 vehicles that are part of the RTA HealthLine bus rapid transit system and 80 paratransit vehicles that provide more than 540,000 trips each year. GCRTA also manages rail service, consisting of heavy rail, light rail, and a downtown trolley service. Overall, GCRTA makes 57.3 million passenger trips annually.



GCRTA retrofitted 10 of its bus facilities with efficient T8 fluorescent lighting. This photo comparison shows the Hayden bus garage before (top) and after (bottom) the retrofit.

locations, T8 fluorescent fixtures are replacing high-intensity discharge (HID) lighting that uses metal halide technology.

GCRTA is achieving additional energy savings by upgrading its facilities' lighting controls. Timers, motion detectors, and scheduled lighting reduction during off hours are being used instead of manual controls.

An infrared energy survey detected problems with the roof in GCRTA's Woodhill Bus Garage—moisture compaction had rendered the insulation inadequate in a 48,000-square-foot area. Roofing contractor T & F Systems installed a new roof with rigid insulation that improves thermal performance and will reduce long-term operational maintenance needs. GCRTA also replaced the 25-year-old overhead doors in its central rail service facility. The old doors had leaky seals, faulty panel joints, and slow retraction time, all leading to wasted energy. The new doors, from Barbicas Construction, open and close more quickly and prevent indoor air from escaping.

**Impact:**

GCRTA's energy efficiency upgrades will reduce energy consumption at its facilities by 31% and save nearly \$500,000 a year in energy costs.

**About TIGGER**

**The Transit Investment for Greenhouse Gas and Energy Reduction (TIGGER) Program** was established in 2009 by the U.S. Department of Transportation's Federal Transit Administration (FTA). Designed to reduce energy use and greenhouse gas emissions in transit agencies around the country, the TIGGER Program made funds available for capital investments that would reduce greenhouse gas emissions or lower the energy use of public transportation systems. An initial \$100 million in American Recovery and Reinvestment Act grants funded 43 competitively-selected transit projects. In 2010, the FTA provided an additional \$75 million in grants to fund 27 new TIGGER projects. These 70 projects are employing a variety of technologies to meet the program goals, including solar installations, building efficiency improvements, wind technology, wayside energy storage for rail, and purchase of more efficient buses. In fiscal year 2011, FTA provided an additional \$49.9 million to continue the program.

**For More Information**

GCRTA:  
[www.riderta.com](http://www.riderta.com)

FTA TIGGER:  
[www.fta.dot.gov/TIGGER](http://www.fta.dot.gov/TIGGER)



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Federal Transit Administration  
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